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Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities Under RCRA, Subtitle C, Section 3004 General Waste Analysis (40 CFR 264.13); Interim Status Standards for General Waste Analysis (40 CFR 265.13)

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BACKGROUND DOCUMENT

STANDARDS APPLICABLE TO OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES UNDER RCRA, SUBTITLE C, SECTION 3004

General Waste Analysis (40 CFR 264.13); Interim Status Standards for General Waste Analysis (40 CFR 265.13)

This document (ms. 1941.4) provides background information and support for EPA's hazardous waste regulations

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This document covers standards applicable to hazardous waste management facilities, specifically those covering waste analysis requirements.

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PART I: THE PROPOSED REGULATION

RATIONALE FOR THE REGULATION

I. Introduction

This is one of a series of documents providing support and background information for regulations issued under Section 3004 of the Resource Conservation and Recovery Act (RCRA). This background document is divided into two parts. The first part contains introductory material which addresses the Congressional authority for the regulation, key definitions used in the regulation, examples of damage incidents which illustrate the need for the regulation, a description of precedents for the regulation set by State and/or other Federal statutes, and a summary of the regulation as originally proposed. The second part of this document summarizes and responds to comments received that relate to the proposed regulations, and indicates the Agency's final regulations and their rationales.

On December 18, 1978, the Agency proposed permanent status standards for analysis of hazardous waste, 43 Federal Register 59000. These standards were not included in the set of standards, specified in 43 Federal Register 58995, applicable to facilities during the interim status period (i.e., the time from a facility's application for a permanent status permit until the Agency's final decision on the permit application). The Agency excluded the proposed requirements for waste analysis from the set of standards applicable during the interim status period because the proposed waste analysis

standards were: (1) keyed to compliance with permit conditions, and (2) subject to variances which required interaction with the Agency.

One commenter asked that the permanent status standards for waste analysis be made applicable during the interim status period, pointing out that the Agency has predicted (43 Federal Register 58984) that the ultimate permitting process may take several years to complete.

The fact that most facilities will have interim status for several years makes the Agency agree with the commenter that standards for waste analysis should apply to facilities during the interim period. This is necessary to ensure that facilities are operated in an environmentally sound manner by requiring that facility personnel analyze hazardous waste for properties which may affect the management methods used at the facility.

Several of the standards that were proposed for interim status did indirectly require facility personnel to know the chemical and physical properties of the waste they managed. For example, proposed §250.44(i) (specified as an interim status standard in proposed §250.40(c)(2)(ix)) prohibited hazardous waste being stored in an unwashed container or tank that had previously held a material with which it was incompatible. To determine whether the waste was incompatible with the previous contents of a tank or container, the chemical and physical properties of the waste needed to

be known, which thus required the facility operator to obtain an analysis of the waste. Similarly, proposed §250.43-3(b)(9) (specified as an interim status standard in proposed §250.40(c)(2)(ii)) prohibited smoking or the presence of an open flame near ignitable or reactive waste. To determine whether the waste exhibited either of these two properties, the facility operator needed to obtain an analysis of the waste.

Thus, although the proposed §250.43 standards for waste analysis were not specified as interim status standards in the proposed rules, many of the proposed §250.40(c)(2) interim status standards implicitly required the facility operator to obtain an analysis of the waste to comply with these standards.

The waste analysis standards have been modified so that they can be implemented directly by the regulated community with little need for consultation with, or interpretation by, the Agency. In addition, compliance with the waste analysis standards is not keyed to compliance with permit conditions. Thus, the two problems with including the waste analysis standards in the set of proposed interim status standards have been resolved.

However, compliance with permit conditions is required for compliance with the Part 264 permanent status standards for waste analysis. This is the difference between the waste analysis standards specified in Part 265 (interim status standards) and Part 264 (permanent status standards). Because

the two sets of standards are otherwise identical, this document pertains to both the Part 264 and Part 265 waste analysis standards.

Because of the need to protect human health and the environment by ensuring that facilities with interim status obtain sufficient information on the properties of the wastes which they manage, and because many of the proposed interim status standards implicitly required facility operators to possess this information, the Agency is including the waste analysis standards in the Part 265 interim status rules.

The text of the Part 264 and Part 265 standards for waste analysis is contained at the end of this document.

II. RCRA Authority for the Regulation

In Section 3004 of Subtitle C of the Solid Waste Disposal Act, as substantially amended by the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, (42 U.S.C. §§6901 et seq.), the Congress of the United States mandates the Administrator of the U.S. Environmental Protection Agency (EPA) to promulgate regulations to establish such standards for hazardous waste treatment, storage or disposal facilities as may be necessary to protect human health and the environment.

Section 3004(3) of RCRA states that the standards to be promulgated by the EPA must include requirements for -

> "treatment, storage, or disposal of all such waste received by the facility pursuant to such

operating methods, techniques, and practices as may be satisfactory to the Administrator;"

In other words, Section 3004(3) of RCRA authorizes the Administrator to establish standards which will ensure that hazardous waste facilities are operated so that the waste which is managed at these facilities will not pose a threat to human health or the environment.

The Agency believes that, in order to ensure that facilities are operated in an environmentally sound manner, facility personnel must be familiar with the characteristics of the waste which they manage. This means that the waste must be analyzed for properties which may affect the management methods used at the facility. EPA is promulgating these regulations jointly under the authority of Section 3004 and under Section 2002(a)(1) of RCRA, which authorizes the Administrator to "prescribe...such regulations as are necessary to carry out his functions under this Act [RCRA]".

III. Key Definitions

The following terms, which are defined in Part 260 are pertinent to this area of regulation:

> "Representative Sample" means a sample of a universe or whole (waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the whole or universe.

This definition has changed slightly from the definition of "representative sample" specified in §250.41(a)(73) of the proposed rules. The rationale for the changes made to the definition is contained in the background document entitled "Definitions".

> "Movement" means hazardous waste transported to a facility in an individual vehicle.

This term has been added to the list of definitions contained in the proposed rules. The Agency's rationale for including it in the final rules is contained on pages 52-53 of this document.

IV. Damage Cases

The following damage cases illustrate that human health and the environment have been endangered when facility personnel lacked sufficient information on the characteristics of the waste which they attempted to manage. These cases provide additional support for establishing standards for waste analysis.

(1) In the summer of 1974, a bulldozer operator experienced dizziness and eye irritation while burying drums at a sanitary landfill in Michigan. He left the bulldozer, and upon returning found the machine in flames. The fire was caused by ignition of flammable wastes in the drums that he was burying. The landfill operator had unknowingly received flammable wastes from a waste hauler.[1]

(2) An employee of a Dakota County (Minnesota) landfill was seriously burned when a caterpillar tractor that he was operating crushed and ignited a container of flammable solvent. The container was not suspected to contain flammable waste because the landfill was not licensed to dispose of flammable waste. The employee suffered burns over 85% of his body and was hospitalized in intensive care for four and one-half months.[2]

Damage incidents (1) and (2) illustrate that facility personnel must know the identity and the chemical properties (e.g., flammability) of the wastes which they are assigned to manage.

(3) A sanitary landfill in Minnesota received approximately twenty 55-gallon drums of sodium arsenite for disposal in their designated liquid disposal area. After the waste had been disposed of, a State agency informed the landfill operator that sodium arsenite is a very toxic defoliant and that the barrels would have to be dug up and sent to a hazardous waste disposal facility. The search involved extensive excavation, required 4 1/2 months, and cost the operator about $22,000.[3]

Damage incident (3) illustrates that merely knowing the identity of a waste provides insufficient information to manage the waste in a manner protective of human health and the environment. In this case, had the facility operator known of the toxic nature of the defoliant received at the facility, the operator might have realized that his landfill lacked the containment properties needed to dispose of such a waste.

> (4) In 1975, a load of empty pesticide containers was delivered to a hazardous (chemical) waste disposal site in Fresno County, California. Not listed on the manifest, and therefore unknown to the site operator, several full drums of an acetone-methanol mixture were included in the load. When the load was compacted by a bulldozer, the acetone-methanol waste ignited, engulfing the bulldozer in flames. The ensuing fire resulted in the dispersion of pesticide wastes.[4]

This damage incident illustrates that waste which is received at a facility must be inspected in order to determine that the waste matches the identity of the waste designated on the accompanying manifest.

> (5) In July of 1975, a waste hauler and five employees at a landfill in Baltimore County, Maryland, were hospitalized when a tank containing industrial waste liquid was dumped into an earth-covered area of a landfill. The men were injured from fumes (hydrogen sulfide) which were released when the waste liquid started to enter the landfill. It is uncertain whether the fumes resulted from the waste coming into contact with a substance in the landfill with which it was incompatible, or whether the waste left the generator's site in an unstable form. Although a chemist at the generator's site allegedly tested the waste's properties before it left the plant, the waste hauler noticed that, upon opening the tank's valve to allow the waste to enter the landfill, the waste was a darker color than usual.[5]

This damage incident illustrates the importance of conducting even simple non-analytical tests (i.e., visual inspection of the waste's color) to determine the identity of incoming waste managed at facilities. In this damage case, had the waste hauler checked the waste's color before he opened the valve to allow the liquid to enter the landfill, he might have realized that the waste was different than that normally received at the landfill, and that further analysis of the waste's characteristics was necessary.

V. State Regulations

The Agency reviewed the hazardous waste regulations of several States to assess the State governments' perceived need to establish standards which ensure that hazardous waste is analyzed before it is treated, stored, or disposed at hazardous waste facilities. The Agency believes that the following discussion of the standards prescribed by the States of California,[6] Minnesota,[7] and Washington,[8] reflects the State governments' belief that waste analysis standards for this purpose should be established.

The State of California uses a manifest system comparable to that prescribed in the proposed RCRA rules, except that California requires that the generator provide a description of the waste, which includes the type of waste, chemical composition, and special handling

instructions on the manifest. (With regard to waste description, the RCRA standards only require that the manifest indicate the waste's identity and special handling instructions).

The States of Minnesota and Washington have similar waste analysis standards for generators of hazardous waste. However, Minnesota's regulations also include the following additional requirements for generators:

1. generators must reevaluate their waste when they have reason to believe that the composition of the waste is altered so that the results of the previous evaluation are no longer representative of the waste.
2. in the disclosure (similar in purpose to the RCRA manifest), the generator must describe:
   - anticipated fluctuations in the chemical composition of the waste
   - the source of the data or information used to identify the hazardous properties of the waste
   - if tests were conducted to evaluate the waste, the disclosure must also describe
     1. the sampling procedure and the reasons for determining that the sample is representative of the waste;
     2. the results of all tests conducted; and

3. a discussion of the accuracy and precision of any tests conducted.

In addition to requirements which pertain to the generator, California also requires that operators of off-site facilities inspect incoming waste to ensure that the delivered waste has essentially the same properties as identified by the generator on the manifest.

SUMMARY OF AND RATIONALE FOR THE PROPOSED STANDARDS

I. Proposed Standard 250.43(f)

A. Summary of Proposed Standard

The proposed standard required owners or operators to obtain a detailed chemical and physical analysis of each hazardous waste handled at the facility at the time of initiating management of the waste. The analysis had to identify the characteristics of the waste which must be known in order to comply with:

- the requirements of the Section 3004 standards, or
- the conditions of the permit issued to the facility under Section 3005.

A "Note" to the standard stated that the scope of the analysis could be limited by the information needed to manage the waste with the processes or methods used at the facility. The "Note" also allowed the owner or operator to use existing information to compile the data needed to comply with requirements of the standard, rather than requiring new testing in all cases.

B. Rationale for the Proposed Standard

The purpose of the standard was to ensure that owners or operators possess sufficient information on the characteristics of the wastes which they manage to be able to treat, store, or dispose of their wastes in a manner which will not pose a threat to human health or the environment.

Unlike the State regulations summarized above, which require that generators provide the owners or operators with the information needed to manage the waste (i.e., chemical composition of the waste), the Agency chose not to impose such a requirement on generators in the RCRA rules. Instead, the proposed Section 3002 regulations gave generators the option of either:

(1) analyzing their waste in accordance with proposed §250.13, or

(2) declaring their waste to be hazardous, in which case, generators did not have to comply with the proposed §250.13 waste analysis requirements.

Accordingly, the Section 3004 waste analysis standards required that owners or operators obtain a detailed analysis of each waste which they intend to manage. The word "obtain" was used in the standard in order to inform owners or operators that they could either:

(1) perform the waste analysis themselves, and presumably pass the costs of the analysis back onto the generator, or

(2) acquire the analysis from the generator, who might already have analyzed the waste to comply with proposed §250.13, or who might have done other analyses to determine the characteristics or composition of the waste, or who might have such information from his production process.

The Agency wanted to inform owners or operators that they did not have to conduct analyses for properties of certain wastes, where a data base on these properties had been developed prior to the effective date of the regulations. For example, if owners or operators routinely measured the vapor pressure of wastes which they receive, or if the vapor pressure of a particular waste had been documented in the literature, the Agency wanted to inform owners or operators that they could use this existing information as part of the data base which they must collect on their wastes. For this reason, a "Note" was added to the standard which stated that the required analysis could be "limited based upon...existing available evidence regarding the waste's composition".

II. Proposed Standard 250.43(g)

A. Summary of Proposed Standard

The proposed standard required that, at least annually, the owner or operator had to obtain or repeat, as necessary, a detailed analysis of each waste managed at the facility.

B. Rationale for the Proposed Standard

The characteristics of a waste tend to vary if the process which generates the waste is modified. For example, the type of ash which is generated by a furnace varies with the type of fuel burned in the furnace.

The effectiveness of certain types of management methods is highly sensitive to variations in waste stream characteristics. Inaccurate information on the characteristics of the waste handled at the facility, may either damage the facility (e.g., placing corrosive waste into a steel tank may damage the structural integrity of the tank), or result in inadequate management of the waste (see damage case (3) on page 7 of this document).

The intent of the proposed standard was to assure quality control of the wastes managed at facilities by requiring that the detailed analysis of the waste (required in §250.43(f)) be repeated as often as necessary to ensure that the facility's information on the wastes' characteristics was accurate and up-to-date. The standard specified that the analysis be repeated "as necessary", to allow for the fact that some waste management processes (e.g., incineration) are more sensitive than others to variations in waste stream quality, and thus, some facilities' waste streams need to be monitored more frequently than others.

The standard did specify that the analysis be repeated at least annually, because the Agency believed that the characteristics of most waste streams vary within the course of a year, and therefore, owners or operators should determine whether such variations would influence

the effectiveness of the methods used at the facility to manage the waste.

III. Proposed Standard 250.43(h)

A. Summary of Proposed Standard

The proposed standard required that each truckload, shipment, or batch of hazardous waste managed at a facility be sampled and analyzed for at least the following four properties:

physical appearance

specific gravity

pH

vapor pressure

A "Note" to the standard allowed less frequent sampling and analysis of waste managed on-site, if it could be demonstrated that no loss in facility operations would result from less frequent sampling at on-site facilities.

B. Rationale for the Proposed Standard

Inadvertent mixups, or deliberate misrepresentation of the wastes sent to a facility, may pose a threat to human health and the environment because such waste may be incompatible with other wastes, or with the processes or methods used at the facility to manage hazardous waste.

The purpose of the standard, therefore, was to ensure that the wastes received at a facility are those which are identified on the labels or accompanying

manifests. Accordingly, the standard required that owners or operators perform qualitative tests on the wastes received at a facility in order to determine the identity of the wastes. The choice of the four properties for analysis was based on the Agency's belief that analysis for these properties would be quick, inexpensive, and suitable to determine the identity of most wastes managed at hazardous waste facilities.

The Agency recognized, however, that the potential for deliberate misrepresentation of the identity or characteristics of a waste is slight at on-site facilities. Therefore, a "Note" was added to the standard which relaxed the requirement to determine the identity of each batch of waste at on-site facilities.

PART II: BASIS FOR THE REGULATION

ANALYSIS OF AND RESPONSE TO COMMENTS RECEIVED ON THE PROPOSED STANDARDS

I. Comments which pertain to all of the waste analysis standards

Issue #1: The generator's responsibilities

a. Summary of Comments

1. The generator should be required to provide the owner or operator with the information needed to comply with the waste analysis standards because the generator is more familiar with the properties of the waste than is the owner or operator, and thus, it will be less expensive for the generator to conduct the required analysis.

2. The generator should be made responsible for any inaccuracies or omissions in the information that he gives to the owner or operator.

b. Response to Comments

1. As explained in Part I of this document, the proposed waste analysis standards of Sections 3001 and 3002 allowed generators to declare their waste to be hazardous, in which case, they were exempt from the actual testing requirements of proposed §250.13. (See the Background Document on the final Section 3002 standards, Part 262, "General Requirements Applicable to Generators of Hazardous

Waste", for the rationale for the Agency's decision which allows generators not to analyze their waste.) Since generators were not required to conduct analyses to characterize their wastes, it would have been inconsistent for EPA to require generators to provide information which could only be acquired through analysis.

The commenters' suggestion that EPA require generators to conduct the Section 3004 waste analysis requirements is based on the premise that all or most generators are more familiar with the properties of their waste than are owners or operators, and thus, it would be less expensive to require generators to conduct the required analyses. The Agency believes on the other hand, that although many generators may be familiar with the properties of the waste which they generate, there are many companies which generate waste about whose properties the generators know little. In the latter case, it is doubtful that these companies will purchase analytical equipment, and the cost of sending their waste to commercial laboratories for analysis would be comparable to the cost of analysis at facilities with on-site labs, or facilities which sub-contract their analytical work.

Furthermore, although generators may have some knowledge about the chemical properties of their waste, the properties owners or operators need to know to manage a waste go beyond chemical composition. For example, to treat a waste, one needs to know not only the constituents of the waste, but also the compatibility of the waste with the techniques and chemical reagents used at the facility in the treatment process. The Agency believes that, in many cases, generators will not possess the latter type of information regarding the wastes properties. If the generator does possess such information, presumably he will give it to the owner or operator in order to save himself the expense of having the owner or operator perform the analysis. Also, by not mandating that either the generator or the owner or operator perform the analysis (note that the requirement of Section 3004 is that the owner or operator must obtain an analysis) the owner or operator can contract with the generator to provide certain information, or even to provide the analysis whenever the generator can do so more efficiently than the owner or operator can. If the generator refuses necessary information, the owner or operator can decline to contract to accept the waste.

Thus, it is the Agency's belief that the approach taken in the proposed rules provides a means more flexible, and yet as equally cost effective as that suggested by the commenter, to ensure that owners or operators obtain the information needed to manage hazardous waste.

2. Section 3008(d) of RCRA states that "any person who knowingly...makes any false statement or representation in any...document...used for purposes of compliance with this subtitle shall...be subject to..." the penalties described in the section. Thus, where a generator knowingly provides the owner or operator with inaccurate information on the waste which he sends to a facility, EPA may bring enforcement actions against the generator.

Where the generator has unknowingly supplied the owner or operator with inaccurate information on the properties of the waste, tort law will allocate the liability for accidental human health or environmental damage which may result from the owner or operator's mismanagement of the waste.

Issue #2: The manifest

a. Summary of Comments

1. The standards should be deleted because the information contained on the manifest provides the owner or operator with sufficient information to:

- comply with the waste analysis standards
- ascertain the parameters necessary for the method of treatment, storage, or disposal utilized at the facility.

2. All information pertinent to the management of the waste should be contained in the manifest.

b. Response to Comments

1. The proposed manifest requirements include no provisions which require that the generator describe either the chemical composition or the compatibility characteristics of the waste sent to hazardous waste facilities. Thus, in the proposed rules, the information provided on the manifest does not provide owners or operators with sufficient information to comply with the Section 3004 requirements.

2. The manifest was not designed to provide owners or operators with information needed to manage waste sent to facilities. Rather, the manifest was designed to control the movement of waste from the generator's premises to off-site facilities, and to contain information necessary to respond to an emergency involving the waste en route.

In order to reduce the paperwork requirements for generators who transport their waste, the Agency adopted the Department of Transportation's (DOT's) shipping paper requirements (with some

modifications) for the tracking system to be used in the RCRA program. To include waste management information on the manifest would require DOT to change their shipping form, which DOT is reluctant to do since this would affect the Nation's entire hazardous material transportation system. To avoid thwarting the plan to devise a common EPA/DOT document to track the transportation of hazardous waste, the Agency has decided not to require generators to supply waste management information on the manifest in the final rules. In addition, as discussed above, some generators will be unable to supply this information because they are unfamiliar with the owner's or operator's management practices.

Issue #3: Redundancy with the Section 3001 waste analysis standards

a. Summary of Comments

The Section 3004 waste analysis standards appear to require an analysis and assessment entirely independent of that required in the standards for analysis in proposed §250.10 - 250.13. The standards should clarify that the analysis required in the Section 3001 regulations satisfies the requirements for waste analysis required in the Section 3004 regulations.

b. Response to Comments

As explained in response to comments under Issue #1, the information needed to characterize a waste (as required in proposed §250.13) may overlap with, but is not identical to, the information needed to manage a

waste (as required in proposed §250.43). Thus, the analysis required in the Section 3001 regulations does not fully satisfy the requirements for waste analysis in the Section 3004 regulations.

However, the standard has been revised to clarify that data developed to comply with the Section 3001 regulations may be included in the data base compiled by the owner or operator to comply with the Section 3004 waste analysis standards.

Issue #4: Facilities regulated under §402 of the Clean Water Act

a. Summary of Comments

1. Waste streams regulated under §402 of the Clean Water Act (e.g., NPDES facilities) should be exempt from the waste analysis standards because they overlap with the NPDES permit requirements.

2. Waste streams contained in closed sewer systems, treated on-site, and discharged in compliance with an NPDES permit should be exempt from the waste analysis standards.

b. Response to Comments

1. To ensure that the treated waste stream complies with the permissible pollutant levels specified in the NPDES permit, the standards prescribed under §402 of the Clean Water Act (CWA) require analysis of the waste stream (for certain named components) before it is discharged to surface waters.

The Section 3004 waste analysis standards, on the other hand, are designed to ensure that waste which enters a NPDES facility is compatible with the treatment processes and chemical reagents used at the facility, and with the construction materials of the containment device (e.g., tank or lagoon) in which the waste is to be treated. Thus, the waste analysis which is required under §402 of the CWA serves a different purpose than that required under Section 3004 of RCRA; in the former case, the analysis is concerned with the properties of the effluent waste stream, whereas in the second case, the analysis is concerned with the properties of the influent waste stream. Since both sets of analyses are needed to ensure that waste is treated in an environmentally sound manner, the Agency rejects the suggestion to exempt NPDES facilities from the Section 3004 waste analysis standards.

2. The final standards exclude waste treated within a totally enclosed treatment facility (which often will be a pipeline) from the requirements of Parts 264 and 265. The Agency's rationale for this exclusion is provided in the Part 264/265 preamble discussion of Subpart P - Chemical, Physical, and Biological Treatment Facilities.

The Agency on November 17, 1980 also suspended the applicability of the requirements in 40 CFR Parts 122, 264, and 265 to owners and operators of certain wastewater treatment units (e.g., clarifiers, aeration tanks, and grit chambers) where the wastewaters are subject to regulation under the Clean Water Act. EPA proposed regulation of these facilities through a permit-by-rule which does not call for special waste analysis. The Agency's rationale for the suspension and proposal is provided in the November 17 preamble discussion.

Issue #5: The hazards associated with sampling and analyzing the waste

a. Summary of Comments

The standards should be deleted because site sampling will:

- in many cases, subject the disposal operators to the potential hazards associated with opening and sampling mis-marked containers
- increase environmental and employee exposure to the waste.

b. Response to Comments

The Agency recognizes that sampling and analyzing hazardous waste entails certain hazards because facility personnel must handle the waste in order to sample and analyze it. The potential for accidents can be minimized by the careful controlled sampling and analysis of hazardous waste. The §264.16 training standards require that facility personnel receive enough instruction so that they can perform their duties in a manner which will not endanger human health or the environment. Thus, facility personnel assigned to analyze hazardous waste, or to inspect incoming waste to determine that it matches that which is identified on the acompanying manifest, must be trained in the special handling procedures which their jobs entail.

The Agency acknowledges that even with this additional training, some risks associated with opening and sampling mis-marked containers remain. However, the Agency believes that the danger posed by exposure of the public to hazardous waste which is mismanaged because of a lack of information on the waste's properties, can be much more serious than the danger posed by exposure of the facility personnel to waste which is mis-labeled. Unlike the public or the environment, facility personnel can prepare for unforeseen occurrences (like the arrival of a mislabeled container at the facility) by complying with the final Subpart C standards for Preparedness and Prevention. In addition, the Agency expects that the likelihood of a mislabeled container arriving at a facility will be small because, if a generator knowingly mislabels a waste, he is subject to the penalties specified in §3008(d) of RCRA.

Therefore, like the proposed rules, the final rules require that waste be sampled and analyzed to the extent necessary to manage the waste in a manner which will not endanger human health or the environment.

II. Comments which are specific to the individual waste analysis standards

A. Proposed Standard 250.43(f)

Issue #1: The level of detail that is required in the analysis

a. Summary of Comments

1. The nature and scope of the required analysis is vague since it depends on permit conditions, which will not be part of the standard, and an interpretation of the entire Section 3004 standards. The standard should specify that the analysis must:

- be in sufficient detail to quantify those characteristics of the waste which may render it a hazardous waste under proposed §250.13 or §250.14.
- specify the parameters for ground-water monitoring listed in proposed §250.43-8(c)(5).

2. The requirement to "identify the hazardous characteristics of the waste" is potentially onerous because some of the wastes which appear in proposed §250.14 are so listed because they contain mutagenic, carcinogenic, teratogenic, or bioaccumulative substances. A detailed chemical and physical analysis would not identify these hazardous characteristics of the waste. Therefore, the required analysis should be limited to that information needed to

treat, store, or dispose of the waste in compliance with the Section 3004 standards which pertain to the management methods used at the facility.

3. For uranium overburden and waste rock, the analysis submitted in the permit application should fulfill the requirement of the standard.

b. Response to Comments

1. Because the information needed to treat, store, or dispose of waste differs with the methods used to manage waste (e.g., the information needed to incinerate waste differs from that needed to neutralize waste), the Agency purposely wrote non-specific waste analysis standards in the proposed §250.43 General Facility Standards. However, the Agency agrees with the general thrust of the commenters' argument that the regulations should, where possible, be more detailed regarding the standards for waste analysis. For this reason, in addition to the general facility standards for waste analysis, the final rules also include, in some technical sections of the regulations, minimum waste analysis standards specific to the management method regulated in the section. For example, the §265.345 standards for incineration contain specific minimum parameters (e.g., halogen and sulfur content and certain heavy metals) for which waste must be analyzed before it is incinerated. However, since most

waste can be landfilled in compliance with the Section 3004 standards without knowing the halogen or sulfur content of the waste, the §265.303 waste analysis standards for landfills do not require that the waste's halogen or sulfur content be known before the waste is landfilled.

By including the more detailed informational requirements in the technical sections of the regulations, while leaving the more general informational requirements in the general facility section of the regulations, the Agency believes that the regulations are specific enough so that owners or operators will know what is expected of them, and yet are flexible enough so that an owner or operator will only be required to conduct analyses which are appropriate for the management methods used at his facility.

As explained on page 20 of this document, the information which is needed to characterize a waste (as required in the Section 3001 regulations) is not synonymous with the information needed to manage a waste (as required in the Section 3004 regulations). Therefore, the revised rules do not specify that the analysis required in the Section 3004 regulations must quantify the characteristics of the waste which render it hazardous under proposed §250.13 or §250.14.

EPA rejects the suggestion that analysis for the parameters specified in proposed §250.43-8(c)(5) should be substituted for the waste analysis required in proposed §250.43(f). The purpose of the required analysis in proposed §250.43-8(c)(5) was to determine if ground water has been contaminated with pollutants emanating from hazardous waste facilities. The parameters which must be known to make this determination differ from those which must be known to manage waste. For example, measuring the specific conductance of ground water may be an appropriate mechanism to monitor the variations in pollutant levels therein, but knowing the specific conductance of a waste will not help an owner or operator determine if his treatment process can effectively neutralize the waste.

Two additional reasons for not requiring owners or operators to analyze their waste for the parameters specified in §250.43-8(c)(5) of the proposed ground water and leachate monitoring standards are:

a. analysis for the majority of the parameters specified in the proposed ground-water monitoring standard can only be conducted in an aqueous media, which makes a requirement to determine these parameters for non-liquid waste inappropriate; and

b. §250.43-8(c)(5)(vi) required that the ground water be analyzed for the concentrations of the principal hazardous constituents, or indicators thereof, found in the largest quantity in the hazardous waste disposed at the facility. Clearly, it would be inappropriate to analyze every waste for the principal constitutents of each waste managed at the facility, since every waste managed at a facility does not have a chemical composition which is similar to the chemical composition of all of the wastes managed at the facility.

Therefore, the final rules do not require that the analysis required in the Section 3004 regulations specify the parameters listed in §250.43-8(c)(5) of the proposed rules.

2. The proposed standard required that owners or operators identify the hazardous characteristics of the waste which must be known to comply with the requirements of Section 3004, or with the requirements of a permit issued under the provisions of Section 3005. The requirements of Section 3004 are concerned with the <u>management</u> of hazardous waste, and the conditions specified in the facility's permit will only be concerned with ensuring that waste is managed in accordance with the Section 3004

standards. The effectiveness of very few waste management techniques will be adversely affected by a facility operator's ignorance of the carcinogenic, mutagenic, teratogenic, or bioaccumulative properties of the waste. For example, the fact that a waste is mutagenic has little to do with the strength of the chemical bonds that hold the waste together, and thus, the ability of an incinerator to destroy a waste by breaking its chemical bonds, will not be affected by whether or not the waste is a mutagen. Therefore, the Agency disagrees with the commenter's criticism that the proposed wording of the standard infers that analysis for these properties is required to comply with the standard.

The Agency agrees that the required analysis should be limited, for the most part, to the information needed to comply with the Section 3004 standards which pertain to the management methods used at the facility. However, because the regulations cannot be written to take into account all of the idiosyncrasies of all management methods used at all facilities, the Agency believes that it should use the facility permit as an auxiliary mechanism to the Section 3004 standards to impose additional requirements specific to unusual waste

management situations. For example, the ability of a facility to treat a particular type of waste may be adversely affected by the presence of a particular contaminant (e.g., the contaminant may combine with the reagent intended to catalyze the treatment process, thereby rendering the reagent useless). In a case like this, the Aency may want to include a specific requirement in the facility's permit to analyze waste to be treated for the particular contaminant. Similarly, in other cases, the permit writer may want to include specific conditions to analyze for other constituents or properties of the waste. Therefore, in addition to the information needed to comply with the Section 3004 standards, the Agency believes that the provision to require analysis for parameters specified in the permit should be retained in the Section 3004 waste analysis standards.

However, since permits will not be issued to facilities with interim status, the §265.13 interim status standards for waste analysis do not contain provisions for compliance with waste analysis requirements specified in the facility's permit.

3. Regarding the comment on uranium overburden and waste rock, the Agency notes that the Solid Waste Disposal Act Amendments of 1980 (Public Law 96-482) directs the Administrator to conduct a comprehensive study of the adverse effects on human health and

the environment from uranium overburden and waste rock. The Amendments also suspend EPA's regulation of this material under Subtitle C pending completion of the study except that the Administrator, through regulations issued under §2002, may require the owner or operator of disposal sites to provide chemical and physical analysis and composition of such wastes, based on available information. EPA announced on November 19, 1980 (45 Federal Register 76618) that it intended to examine the scope of the statutory exclusion and consider potential regulatory actions under §2002. The Agency requested public comment on both issues.

Issue #2: The frequency of the required analysis

a. Summary of Comments

1. The requirement for performing the analysis at the time of "initiating management of hazardous waste" is unclear for wastes whose management at a particular facility antedates the effective date of these regulations.

2. The standard should specify a compliance schedule (e.g., 180 days after the effective date of the rules) for these wastes, due to the anticipated shortage of qualified personnel and laboratories to conduct waste analyses.

3. The requirement to conduct a detailed analysis of each batch of hazardous waste received at a facility should be relaxed for batches which contain wastes of relatively constant composition.

b. Response to Comments

1. The Agency agrees that the phrase "at the time of initiating management of the waste" was confusing in the proposed rules. The intent of the standard was to require a detailed analysis of every type of waste which is managed at the facility before the actual management of the waste begins.* In order to take into account those wastes managed before the effective date of the regulations, the phrase "at the time of initiating management of the waste" was inserted in the proposed standard to inform owners or operators that they would have to analyze the types of waste previously managed at the facility before the effective date of the regulations in order to continue to manage these types of waste after the effective date of the regulations. However, since all waste management activities which have been conducted before, and which continue to be conducted after the effective date of the regulations, are required to be in compliance with all of the applicable Section 3004 standards, there is no need to reiterate this fact in each standard. Therefore, the phrase "at the time of initiating management of the waste" has been eliminated from the final rules. It should be

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* Although storage is a form of waste management, the Agency recognizes that it may be necessary to store waste for a minimal amount of time (probably no more than a few hours) at facilities before analyzing it.

understood, however, that a detailed analysis must be, or have been, performed for each waste which the facility continues to manage.

2. The Agency disagrees with the suggestion that a compliance schedule should be devised for waste whose management at facilities antedates the effective date of the regulations. The Agency believes that the alleged shortage of qualified personnel and laboratories to conduct the required analysis is not so severe that the turn-around time for wastes sent to laboratories for analysis will exceed six months (which is the time between the promulgation date and the effective date of the regulations).

3. The Agency recognizes that the proposed wording of the standard was unclear because it doesn't specify whether owners or operators are required to perform a detailed analysis on every batch of a particular waste, or only on representative batches of the waste. The intent of the standard was to require the latter type of analysis. To clarify this point, the final standard requires that the detailed analysis be performed on a representative sample of the waste to be managed.

Issue #3: The confidentiality of the chemical composition of the waste

a. Summary of Comments

1. Requiring the owner or operator to obtain a detailed chemical and physical analysis of the hazardous waste will make it difficult to protect proprietary information related to the composition of the waste.

2. If the analysis is provided to the owner or operator from the generator, a mechanism should be provided to the generator, so that the furnishing of detailed information can be treated as confidential, if requested.

b. Response to Comments

1. The Agency believes that the appropriate format to use to address problems concerning confidentiality of information provided by generators to owners or operators, is a contract rather than a regulation. If a generator believes that the dissemination of the chemical composition of his waste to outside parties will be advantageous to his competitors, the Agency believes that the generator should enter into a contractual agreement with the owner or operator, whereby the owner or operator must treat as confidential the information which the generator provides to him, or which the owner or operator obtains from a lab concerning the generator's waste.

It is, of course, possible that it will be necessary for the Agency to learn of the contents of such information in order to enforce the Section 3004 hazardous waste regulations. In such a case, Section 3007(b) of RCRA provides that this information may be treated as confidential if it

> concerns or relates to trade secrets, processes, operations, style of work, or apparatus, or to the identity, confidential statistical data, amount or source of any income, profits, losses, or expenditures of any person, firm, partnership, corporation, or association; [18 U.S.C. §1905]

EPA has protected such information through the regulations of 40 CFR Part 2, §2.305, as amended September 8, 1978, which provide that information which companies indicate they wish treated as confidential will be released only if EPA finds, after opportunity for a contested hearing, that the release of this information is not "likely to cause substantial harm to the company's competitive position" [40 CFR §2.208(e)(1)].

2. Because legitimate interests in the confidentiality of the chemical composition of a generator's waste will be protected by contractual provisions and by EPA's existing confidentiality regulations, it is unnecessary to provide a separate mechanism in the Section 3004 rules which addresses the confidentiality of this type of information. The Agency believes

that the need to protect human health and the environment from the mismanagement of hazardous waste overrides the need for further mechanisms to protect proprietary information related to the composition of a generator's waste.

Issue #4: Miscellaneous comments

a. Summary of Comments

1. The "Note" to the standard should be deleted because it eliminates some of the specificity of the proposed standard.

2. The analysis should have to be certified, and EPA should immediately review the analysis and comment, if necessary, on its acceptability.

3. The standard should specify the methods to be used in obtaining samples of the waste for analysis.

b. Response to Comments

1. The Agency agrees that the "Note" to the standard could be interpreted to eliminate some of the specificity of the standard. The only part of the "Note" which has been retained in the final rules is that provision which allows the owner or operator to include data developed before the effective date of the regulations in the data base which must be compiled to comply with the standard. The Agency acknowledges that the rest of the "Note" contributes little to the standard, and thus, has eliminated it from the final rules.

2. The Agency agrees that it would be desirable for EPA to review the results of each waste analysis to ensure that the analysis contains the information needed to manage a waste. Unfortunately, the number of reviews which EPA would have to conduct if it required owners or operators to obtain EPA review of their test results before waste could be managed, makes such a requirement impractical because EPA lacks sufficient manpower to provide a timely turn-around of the test results.

Although EPA cannot examine each waste analysis to ensure that all information necessary for proper management of the waste has been obtained, the Agency has, however, decided to require owners or operators to develop and maintain a waste analysis plan. The plan will perform the same function as the suggested requirement. At a minimum, the plan must describe:

(a) the parameters for which each waste will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to manage the waste in a manner which complies with the Section 3004 standards);

(b) the test methods which will be used to test for these parameters; and

(c) the sampling method which will be used to obtain a representative sample of the waste to be analyzed.

Because this plan will be reviewed when the facility's application for a permit is evaluated, the Agency believes that this review process will encourage owners or operators to conduct thorough analyses of the waste which they manage.

3. The Agency agrees that the standards should specify the methods to be used to obtain samples of the waste for analysis. Therefore, the final standards require that the samples be obtained using either:

(i) One of the sampling methods described in Appendix I of the Part 261 rules; or

(ii) An equivalent sampling method.

[Comment: See §261.20(c) for related discussion.]

B. Proposed Standard 250.43(g)

Issue #1: The frequency of the retesting requirement

a. Summary of Comments

1. The annual retesting requirement is inadequate for operations highly dependent on consistent waste stream quality (e.g., incinerators).

2. The minimum annual testing requirement is an unnecessary expense. The retesting of a waste should only be required when:

- the process or operation generating the waste changes, or

- it is reasonably known that the composition or characteristics of the waste has changed.

3. The annual retesting requirement should be deleted because provisions for retesting are included in proposed §250.10(d)(1)(iii).

4. The provision for repeated analysis is inconsistent with Section 3005(c) of RCRA, under which an owner or operator may be afforded a specified period of time for bringing his facility into compliance with the Section 3004 requirements. Therefore, the provision for repeated analysis should not apply to facilities whose permits include compliance schedules.

5. The Agency should clarify:
   - what is meant by the phrase "as necessary"
   - whether the permit writer or the owner or operator determines the frequency of the analysis
   - whether, in the latter case, will failure to perform sufficient monitoring be cause for enforcement action?
   - whether sampling annually will protect the owner or operator from enforcement action.

b. Response to Comments

1. The proposed standard required that at least annually, an owner or operator must obtain or repeat, as necessary, a detailed analysis of each waste

managed at the facility. Thus, for managment methods highly dependent on consistent waste stream quality, the standard required that the analysis be repeated as often as necessary to ensure that the waste would be managed in a manner which would not endanger human health or the environment. The decision as to how often within the year the analysis would have to be repeated to comply with the standard was left up to the owner or operator. For the most part, this decision is still left up to the owner or operator in the final rules. However, the owner or operator is required to specify how often he intends to repeat the analysis in the facility's waste analysis plan and permit aplication.

2. The Agency believes that the properties of most waste streams vary within the course of a year, and therefore, owners or operators should re-analyze waste, at least annually, to determine if such variations will influence the effectiveness of the methods used at the facility to manage waste. However, if the owner or operator is correct in his belief that the properties of the waste which he manages will not change, then the Agency agrees that to re-analyze the

waste annually would be unnecessary. Therefore, the minimum annual retesting requirement has been deleted from the final rules. However, the final rules do require that, at a minimum, waste must be re-analyzed (1) when the owner or operator is notified, or has reason to believe, that the process or operation generating the waste has changed, and (2) for off-site facilities, when the results of the spot-check tests required in the final §264.13(c) of the regulations indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

3. The provisions for retesting in proposed §250.10(d)(1)(iii) referred to the waste analysis required in proposed §250.13, and thus did not apply to the waste analysis requirements of Section 3004 (see discussion on page 30 of this document). However, the provision for retesting specified in proposed §250.10(d)(1)(iii), which requires that the analysis be repeated "when there is a significant change in their feed materials or operations which may alter the test results", is comparable to the provision for retesting specified in the final Section 3004 waste analysis requirements.

4. As explained in the response to comments received on proposed §250.43(f), the Agency believes that

the 6 month grace period between the promulgation and the effective dates of the regulations, should provide adequate time to perform the analysis required in the Section 3004 standards. Therefore, since the Agency believes that it will be unnecessary to provide facilities additional time to comply with the waste analysis standards, including those facilities on a compliance schedule for other aspects of the regulations, the Agency disagrees with the comment that the provisions for re-analysis of waste are inconsistent with Section 3005(c) of RCRA.

5. The Agency has deleted the phrase "as necessary" from the final rules, and has specified minimum conditions for re-analysis, as described in the response to comment #2 of this section.

During interim status, the owner or operator will determine how often his waste should be re-analyzed, and will include that information in the facility's waste analysis plan. When the facility's permit application is evaluated, the permit writer will review the facility's waste analysis plan, and will modify the provisions of the plan where he thinks that the owner or operator has selected an inappropriate time interval for re-analysis of the waste managed at the facility.

In the case of interim status, during which the owner or operator is the sole decision-maker regarding the frequency with which waste should be re-analyzed, if an accident occurs at the facility due to inaccurate or out-dated information on the properties of the waste, the enforcement actions which may be brought against the facility may depend on whether the owner or operator selected the time interval for waste re-analysis in good faith. If it can be determined that the owner or operator knowingly specified too long a time interval for waste re-analysis, then the Agency may subject the facility to the penalties specified in Section 3008 of RCRA.

Since the Agency has deleted the minimum retesting requirement from the revised rules, annual waste analysis alone will not immunize owners or operators from enforcement action.

Issue #2: Miscellaneous Comments

a. Summary of Comments

1. The words "waste stream" should be replaced by the words "hazardous waste", because "waste stream" has not been defined.

2. The standard should be deleted because the analysis is already included in proposed §250.23.

b. Response to Comments

1. The Agency agrees that, since the term "waste stream" has not been defined, the term "hazardous waste" should be used rather than the term "waste stream". "Waste stream" has been deleted from the final rules.

2. The proposed §250.23 standards deal with reporting requirements applicable to generators. The Agency fails to see how these standards have anything to do with the Section 3004 waste analysis standards for hazardous waste management facilities, and thus rejects the suggestion to delete the latter because they allegedly overlap with the proposed generator reporting requirements.

C. Proposed Standard 250.43(h)

Issue #1: The four properties for which the wastes must be analyzed

a. Summary of Comments

1. The choice of the four properties for measurement seems arbitrary, and their importance is unclear.

2. The properties to be analyzed for may not be necessary or appropriate for all categories of waste. Therefore the standard should be revised so that:

- provisions for a variance from the required analysis are afforded in the standard
- the properties to be analyzed for are deleted from the standard, and the selection of the properties of the waste to be analyzed is left up to the facility management
- the waste is analyzed by the method specified by the generator as suitable for determining the waste's identity.

3. There is no assurance that any of the four tests will determine the actual identity of the waste. Additionally, the identity of the waste is of secondary importance in determining the characteristics of the waste which impact waste management.

b. Response to Comments

1-3 The choice of the four properties for which analysis was required in §250.43(h) in the proposed rules, was based on the Agency's belief that analysis for these properties would be quick, inexpensive, and suitable to determine the identity of most waste managed at hazardous waste facilities. However, the Agency agrees that measuring for these properties may be inappropriate for certain categories of waste (e.g., measuring the specific gravity of a solid tells the owner or operator little about the properties of the waste which would determine its identity). Therefore, in response to comments, the

four properties to be analyzed for have been deleted from the standard. Instead, the final rules require that the owner or operator specify the tests which will be used to determine the identity of incoming waste managed at the facility. The Agency will review the tests selected by the owner or operator to determine the identity of the wastes managed at the facility when the facility's permit application is evaluated. Where the permit writer believes that the facility's waste analysis plan is inadequate, he will modify the plan to include procedures which he believes are appropriate to determine the identity of incoming waste to the facility.

Issue #2: Sampling each truckload of similar waste

a. Summary of Comments

1. The requirement to sample each truckload of uniform waste is unreasonable because:

   - it is expensive in terms of manpower and laboratory costs
   - the waste stream characteristics are not likely to vary
   - changes in the waste stream's characteristics will be noted on the manifest.

   Therefore, facilities which receive large numbers of truckloads of uniform waste should not be required to sample each truckload unless:

- the process or operation which generates the waste changes
- the batch differs significantly from those which were previously received at the facility
- a change in the waste's constituents is noted on the manifest.

2. Where it can be demonstrated that multiple truckloads of waste have uniform physical and chemical characteristics:
   - enough testing should be done to assure proper facility operation
   - sampling of only a small percentage of the transport loads, or sampling only once or twice a week, should be required
   - analysis of only random samples should be required to determine possible changes in the waste stream characteristics.
3. The use of the term "shipment" should be clarified.

b. Response to Comments

1 & 2 The Agency believes that the owner or operator should determine the identity of each truckload managed at the facility. However, where the owner or operator is confident that the contents of each truck contains waste which has uniform chemical and physical properties, the Agency doesn't believe that sampling each truckload of waste is necessary to determine the waste's identity. In cases like

this, a visual comparison of the waste's color and texture with waste in other trucks may suffice to ensure that the incoming waste in each truck is the same.

Therefore, the requirement to sample each truckload of waste has been deleted from the standards. In its place, the final rules require that the waste analysis plan developed by the owner or operator, must describe the tests to be used, and the frequency with which these tests will be conducted, to determine the identity of incoming waste managed at the facility. In addition, for those management methods which are highly sensitive to fluctuations in waste stream quality (e.g., incinerators), minimum frequency requirements for these tests (e.g., each truckload) may be prescribed in the specific waste analysis standards contained in the technical sections of the regulations.

The commenters' statement that "changes in the waste stream's characteristics will be noted on the manifest" is incorrect (see discussion on page 22 of this document).

3. The Agency agrees that in many of the proposed rules in which the term "shipment" was used, it was unclear whether the requirements pertained to each truckload of a waste, each convoy (i.e., more than one truck) of a waste transported on any one day, or each convoy of a waste transported over several days. To eliminate this

ambiguity, the Agency has added the definition of "movement" to the final Part 260 rules.

"Movement" is defined as "hazardous waste transported to a facility in an individual vehicle". An example of a "movement" is a truckload of waste. Unlike the proposed rules, the term "shipment" is not used in the final rules to refer to truckloads or other similar aggregates of transported waste. The word "shipment" is a "term-of-the-art" used in the transportation industry which has a meaning different than that of the Agency's use of the term in the proposed rules. To avoid the potential confusion which might result from EPA using the term "shipment" differently than the way the transportation industry uses it, the term "movement" has been added to the final rules to refer to waste transported in an individual vehicle.

Issue #3: The "Note" to the standard

a. Summary of Comments

1. The "Note" should apply to off-site, as well as on-site facilities.
2. The "Note" should apply to off-site facilities:
   - owned or controlled by the generator

- solely operated for the disposal of a particular generator's waste
- where a disposal contract exists between a generator, carrier, and disposer of a specific waste.

3. The "Note" should be deleted because analysis is the key to proper waste management.

b. Response to Comments

1. Because the potential for deliberate misrepresentation of the identity of a waste is minimal at on-site facilities, the final standard for determining the identity of received waste only applies to off-site facilities.

2. The Agency disagrees that the off-site facilities mentioned by the commenters should be exempt from the standards for waste determination because the potential for a mixup of a waste's identity is significantly greater if the waste is transported off-site. However, the Agency believes that the modification made to the standard, which allows the owner or operator to tailor the facility's waste analysis plan to contain those tests needed to determine the identity of waste managed at the facility, provides enough flexibility so that the owners or operators of the types of off-site facilities mentioned by the commenters will be able to devise a program

which is appropriate to the waste management needs of these facilities.

3. The "Note" to the proposed standard did not relax the requirement for on-site facilities to conduct a detailed analysis of the wastes which they manage. The "Note" simply relaxed the requirement to determine the identity of each batch of waste managed at these facilities. The Agency believes that because these facilities are required to analyze the wastes which they generate/manage, it is unnecessary to require them to re-determine the identity of these wastes. Therefore, the final rules for waste determination only apply to off-site facilities.

PART III: RESPONSE TO COMMENTS ON MAY 19, 1980 REGULATION

I. Introduction

When the final regulation language for the general waste analysis requirement was promulgated on May 19, 1980, comments were requested as to the propriety of including this requirement as an Interim Status Standard (ISS). The comments received by the Agency strayed from the issue of inclusion in ISS. However, the Agency hopes that the following responses will assist the regulated community in developing a better understanding of the requirements.

II. Response to Comments

Issue #1: Delay the effective date

A. Summary of Comment

It may not be possible to complete all the necessary analyses by November 19, 1980. EPA should grant a six month extension.

B. Response to Comment

Since the information gained through waste analysis is necessary for compliance with most of the requirements of Part 265, the decision which confronts the Agency is whether to delay the effectiveness of this Part. The Agency, in view of the mounting hazardous waste crisis and in the face of considerable Congressional and public pressure, cannot delay the implementation of Part 265 any longer. Therefore, no delay has been granted.

Issue #2: Allow storage before analysis.

A. Summary of Comment

The requirement states that the owner or operator must obtain a detailed waste analysis before the waste is treated, stored, or disposed. The requirement makes it illegal to store the waste while the waste analysis is being completed. An owner or operator receiving shipments of hazardous waste must be allowed to store it while he conducts the necessary analyses.

B. Response to Comment

Waste analysis information is necessary to comply with the requirements for storage in tanks, containers or piles. The detailed analysis is a one-time analysis which should be performed on a sample of the waste before the first shipment is received at a facility. The analysis will ensure that the facility receiving the waste will be capable of managing it properly.

Issue #3: Require generator to disclose information.

A. Summary of Comment

The Agency should require the previous owner or a waste to disclose all information about the waste to the treater, storer or disposer.

B. Response to Comment

The Agency does not have the authority to require the disclosure of information to a third party. However, a treater, storer, or disposer can always refuse to accept waste if necessary information is not provided.

Issue #4: Time and cost of verifying manifest.

A. Summary of Comment

Excessive lead time and cost will be involved in conducting the analyses necessary to verify the manifest information.

B. Response to Comment

While the initial waste analysis may require a substantial length of time, verification of manifest information will frequently involve relatively quick tests (e.g., pH, visual comparison with standard sample) which will be performed at the facility. However, in some cases a more extensive analysis will be required. This may involve more expense, but should not require extensive time since it can be performed at the facility.

FINAL REGULATION LANGUAGE

§264.13 General Waste Analysis

(a)(1) Before an owner or operator treats, stores, or disposes of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this Part or with the conditions of a permit issued under Part 122, Subparts A and B, and Part 124 of this Chapter.

(2) The analysis may include data developed under Part 261 of this Chapter, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with paragraph (a)(1) of this Section. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part or all of the information required by paragraph (a)(1) of this Section. If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.]

(3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

(i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and

(ii) For off-site facilities, when the results of the inspection required in paragraph (a)(4) of this Section indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this Section. He must keep this plan at the facility. At a minimum, the plan must specify:

(1) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with paragrah (a) of this Section);

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(i) One of the sampling methods described in Appendix I of Part 261 of this Chapter; or

(ii) An equivalent sampling method.

[Comment: See §260.21 of this Chapter for related discussion.]

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date;

(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply; and

(6) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in §264.17.

(c) For off-site facilities, the waste analysis plan required in paragraph (b) of this Section must also specify the procedures which will be used to inspect, and if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

[Comment: Part 122, Subpart B, of this Chapter requires that the waste analysis plan be submitted with Part B of the permit application.]

§265.13 General Waste Analysis

(a)(1) Before an owner or operator treats, stores, or disposes of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this Part.

(2) The analysis may include data developed under Part 261 of this Chapter, and existing published or documented data on the hazardous waste or on waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with paragraph (a)(1) of this Section. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part or all of the information required by paragraph (a)(1) of this Section. If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this Section.]

(3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

(i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and

(ii) For off-site facilities, when the results of the inspection required in paragraph (a)(4) of this Section indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this Section. He must keep this plan at the facility. At a minimum, the plan must specify:

(1) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with paragraph (a) of this Section);

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(i) One of the sampling methods described in Appendix I of Part 261 of this Chapter; or

(ii) An equivalent sampling method.

[Comment: See §261.20(c) of this Chapter for related discussion.]

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date;

(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply; and

(6) Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in §§265.193, 265.225, 265.252, 265.273, 265.345, 265.375, and 265.402.

(c) For off-site facilities, the waste analysis plan required in paragraph (b) of this Section must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

References

1. Confirmed by telephone by Cindy Giansante, Environmental Scientist, EPA, Washington, D.C., on November 14, 1979 with Colton B. Phillips, Sanitary Supervisor, Genessee County Health Department, Michigan.

2. Hazardous Waste Generation - Twin Cities Metropolitan Area. Barr Engineering Company, Minneapolis, Minnesota. October, 1973, p. B-2.

3. St. Paul Dispatch, "Search for Toxic Wastes Buried at Pine Bend Landfill Continues", September 2, 1975. Confirmed by telephone by Cindy Giansante, Environmental Scientist, EPA, Washington, D.C., on November 14, 1979 with Dave Gurney, Environmental Health Engineer; Dakota County Highway Department; Hastings, Minnesota.

4. Confirmed by telephone by Cindy Giansante, Environmental Scientist, EPA, Washington, D.C., on November 14, 1979 with Jerry Gavin, Life Scientist, EPA, Region 9, San Francisco, California.

5. U.S. Environmental Protection Agency. Hazardous Waste Disposal Damage Reports. Office of Solid Waste. EPA/530/SW-151.3, June, 1976, pgs. 10-12.

6. California: Title 22 (Register 77, No. 42 - 10-15-77) Division 4. Environmental Health, Chapter 2. Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes, Section 60231 - 60233.

7. Minnesota Hazardous Waste Management Rules (February 3, 1978).

8. Washington: Hazardous Waste Disposal, Chapter 70.105.030, 1976.